

wherein a signal associated with the evoked response is sensed between at least one of said atrial electrodes and said ventricular electrodes; and

(e) coupling capacitors electrically coupled together wherein a capacitance of the capacitors coupled together has a combined reduced capacitance of less than 5 microfarads wherein the combined reduced capacitance of less than 5 microfarads attenuates afterpotentials which result due to the application of the pacing stimulus to the heart by said cardiac pacing system, said capacitors being electrically coupled to said pacing circuit.

REMARKS

Applicant would like to thank the examiner for the thorough examination of the subject application. The office action rejects claims 19-36 under 35 U.S.C. §112 second paragraph, based on the finding that the limitation "coupling capacitors having a combined reduced capacitance" is vague and not supported by structure. Claim 19 has been amended to clarify that the capacitors are electrically coupled together, thereby identifying the structure to have the capacitors combined. The amendment to claim 19 is believed to overcome the rejection under §112 and a notice to that affect is respectfully solicited.

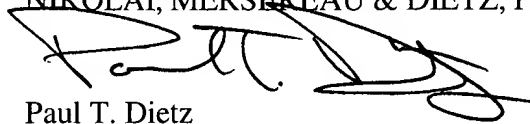
The office action rejects claims 1-4, 6, 11, 15, 19-22, 24, 29, and 33 under 35 U.S.C. §102(b) as being anticipated by Haefner et al. (5,690,683). The office action indicates that Haefner meets the limitation of the term "reduced capacitance". Apparently the office action is basing this finding on the assumption that reduced capacitance means "anything below 40 microfarads, since 40 microfarads is the top typical coupling capacitance in a pacemaker" and that the coupling capacitor of the device described by Haefner has a capacitance less than 40 microfarads. The independent claims have been amended to clarify that "reduced capacitance" is

meant to mean something less than 5 microfards. Support for this amendment is found in the specification at page 11, lines 24-28. Haefner does not does not describe a device that includes a coupling capacitor having a capacitance less than 5 microfarads. Hence, the independent claims include a limitation that is neither shown, described, or obvious based on the teachings of Haefner. Thus, the independent claims and all pending dependent claims are believed to be patentable over the Haefner reference and a notice to that affect is respectfully solicited.

Further, claims 1-36 are rejected under 35 U.S.C. §103(a) and under the judicially created doctrine of double patenting, as being unpatenable over Zhu et al. (5,843,136) issued on December 1, 1998, or Zhu et al. (6,044,296) issued March 28, 2000. Each claim of the present application and all the claims of Zhu et al. (5,843,136) and Zhu et al. (6,044,296) are commonly owned. A terminally disclaimer is attached hereto and is believed to overcome the rejections of the pending claims based on the Zhu et al. references. A notice to that affect is respectfully requested.

The above amendments are made to advance the prosecution of this application and are believed to put the claims in a condition of allowance. It is submitted that the amended claims patentably define over the cited art in that they are neither anticipated by the cited references nor made obvious. Reconsideration and allowance of claims 1-36 is respectfully requested.

Respectfully submitted,
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Marked-up Version of Claims Being Amended

1. (Three Times Amended) A cardiac pacing system for use with unipolar or bipolar atrial and ventricular pacing and sensing leads, said cardiac pacing system including:

- (a) an atrial lead having atrial electrodes electrically coupled thereto;
- (b) a ventricular lead having ventricular electrodes electrically coupled thereto;
- (c) pacing means for providing a pacing stimulus to at least one of an atrium or ventricle of a heart, said pacing means electrically coupled to at least one of said atrial lead and said ventricular lead;
- (d) sensing means for sensing a response evoked by the pacing stimulus, said sensing means electrically coupled to at least one of said atrial lead and said ventricular lead said sensing means including multiple independent blanking switches corresponding to independent electrodes, wherein a signal associated with the evoked response is sensed between at least one of said atrial electrodes and said ventricular electrodes; and
- (e) afterpotential attenuation means for attenuating afterpotentials which result due to the application of the pacing stimulus to the heart by said cardiac pacing system, said afterpotential attenuation means being electrically coupled to said pacing means and having a reduced coupling capacitance of less than 5 microfarads.

19. (Twice Amended) A cardiac pacing system for use with unipolar or bipolar atrial and ventricular pacing and sensing leads, said cardiac pacing system including:

- (a) an atrial lead having atrial electrodes electrically coupled thereto;

- (b) a ventricular lead having ventricular electrodes electrically coupled thereto;
- (c) a pacing circuit including a pacing charge storage capacitor that provides a pacing stimulus to at least one of an atrium or ventricle of a heart, said pacing circuit electrically coupled to at least one of said atrial lead and said ventricular lead;
- (d) a sensing circuit that senses a response evoked by the pacing stimulus, said sensing circuit electrically coupled to at least one of said atrial lead and said ventricular lead, said sensing circuit including multiple independent blanking switches corresponding to independent electrodes, wherein a signal associated with the evoked response is sensed between at least one of said atrial electrodes and said ventricular electrodes; and
- (e) coupling capacitors electrically coupled together wherein a capacitance of the capacitors coupled together has [having] a combined reduced capacitance of less than 5 microfarads [that attenuate] wherein the combined reduced capacitance of less than 5 microfarads attenuates afterpotentials which result due to the application of the pacing stimulus to the heart by said cardiac pacing system, said capacitors being electrically coupled to said pacing circuit.